

MARTIN MARIETTA'S CEO SPEAKS TO PROGRAM MANAGER

*Norm Augustine — Industry Giant and
Longtime Friend of DSMC*

Recently, the College hosted a distinguished guest lecturer. His name was Norman R. Augustine, and for most of you, no further introduction is necessary. For those of you who have never had the privilege of reading his published works or attending one of his lectures, *Program Manager* is indeed privileged to present our interview with this distinguished author, lecturer, and former Under Secretary of the Army.

Mr. Augustine is currently the Chairman and Chief Executive Officer, Martin Marietta Corporation. As *Program Manager* goes to press, Martin Marietta and Lockheed Corporation are expected to finalize their "merger of equals" soon. Mr. Augustine will assume the title of President of the new Lockheed Martin Corporation. He shares with us a view of acquisition reform from the perspective of a major defense contractor.

Program Manager: Since Congress recently legislated acquisition reform, how will this affect the way you do business with the government?

Program Manager gratefully acknowledges the assistance of Mr. Zack Russ, Director, Editorial Services, Martin Marietta Corporation, in the preparation of this article.

Mr. Augustine:

Let me begin by saying that Secretaries Perry, Deutch and Kaminski, the Congress and the President all deserve broad acclaim for the first successful initiative in memory to reform the much-maligned defense acquisition process. Having served on both sides of the acquisition process, I recognize how difficult it is to make progress in this area. One reason is that it's so arcane. No politician wins any votes at home with it. So I commend those involved with this initiative, and I believe it will somewhat improve the working relationship between the Department of Defense (DoD) and its suppliers.

Having said that, however, we all must realize this is barely a first step, with much more yet to be done. We should avoid declaring victory and should instead turn our attention to assuring that the regulations implementing this new act carry out the



Mr. Norman R. Augustine, Chairman and Chief Executive Officer, Martin Marietta Corporation.

legislation's intentions. And, of course, we still need to reform the entire acquisition culture — something that is easier to envision than to implement — by encouraging such activities as prudent risk-taking, delegating and long-term commitment. Among the most important things we can do is to escape the current situation described

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by the quote, "Where everyone is in charge of everything, no one is in charge of anything." We should assign authority and responsibility to the same individuals — and, in the case of acquisition projects that individual should be, in my judgment, the program manager.

Program Manager: What are the most important next steps that should be taken now to improve the process?

Mr. Augustine: The single most important step would be to halt the "turbulence" that's prevalent throughout the acquisition process. The principal cause of inefficiency in procurement is not the infamous coffee pot, hammer or even toilet seat; it is the perpetual motion of requirements, people, schedules, funding and the like. I once added up the total amount of money wasted on highly publicized examples of procurement waste — including \$600 toilet seats, \$7,000 coffee pots, \$400 hammers, and the like — and came up with a grand total of \$92,000. Which sounds pretty egregious until you consider that over a period of three decades, four successive generations of forward area air defense systems — from Mauler to Roland to Sgt. York to ADATS — were canceled, at a total cost of more than \$6.7 billion. That's a poor return for the taxpayer. I also added up the money spent in recent years on canceled programs as a whole — programs which did nothing to help our nation's fighting capability — and found that the funds expended could have purchased 1,000 Abrams tanks, 100 F-16 fighters, 1,000 AMRAAM missiles, 10 Titan IV launch vehicles, 20 JSTARS aircraft, 10,000 Javelin missiles, 70,000 MLRS rockets and one nuclear submarine.

What's needed is common agreement on implementing several needed reforms, including: making it more difficult to start new programs; giving very few people the authority to change or delay or stop a program once started; reducing the size of staff



Photo courtesy of Martin Marietta Corp.

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organizations in Congress, the Pentagon and industry; setting nominal "zero real growth" overall funding baselines for initial out-year planning; and establishing multi-year budgets for the Pentagon and its programs.

Program Manager: What else needs to be done?

Mr. Augustine: Well, let me broaden the question to include the overall defense budget, which has been in a dive for the better part of a decade. Recognizing that a consensus does not yet exist for substantial increases in defense spending, I believe at the very least the defense budget should be stabilized. The recent Administration initiative to add \$25 billion over several years to defense is a constructive step, but in my judgment

does not address the full range of the challenges the nation's defense establishment faces nor does it significantly do so in the near term. It should also be noted that the lag time between authorizations and outlays in the procurement budget virtually assures several more years' erosion in the defense industrial base.

Further, the balance among procurement, R&D, and O&M funding must be restored. We must provide greater funding for exploratory development and prototyping — particularly high-risk/high-payoff pursuits of the type which helped make American defense technology the best in the world and which is central to our stated defense strategy. We must invest more in modernization so that our forces are well equipped to protect themselves and our national interests. I calculated recently that we are now on a replacement cycle of about 54 years, meaning that the average item of equipment provided our Armed Forces has to last 54 years. This is in a world where technology generally has a half-life of from 2 to 10 years.

To the great credit of those bearing the grave responsibility of providing for America's Armed Forces, the nation has, in this recent downsizing, to a considerable extent avoided the trap of building a so-called "hollow force" in terms of its readiness to fight. But what we must also assure ourselves is that we do not gradually build a force engendering a new kind of hollowness, namely the lack of modernization needed to fight effectively. Thus, we must be concerned both with readiness and with modernization. Lack of attention to the former produces near-term casualties, to the latter produces future casualties.

One of the complicating factors in defense budgetary planning is that the time horizons are so distant. It is useful to recall that the systems that performed so well in the Persian Gulf largely represented the technology of the 1960s, the development of the

1970s, and the production of the 1980s — all utilized by the people of the 1990s. In other words, the decisions we make today will to a considerable extent determine the casualties we will suffer in carrying out our national security objectives in the early part of the next century. This is a very great responsibility for each of us.

Program Manager: What is your view of the trend by the Services to retain depot and maintenance work rather than farm it out to private companies?

Mr. Augustine: Any relative expansion of the government in maintenance and repair operations, of course, only intensifies the decline of the defense industrial base. This trend, minor at first, has accelerated in recent years as military installations seek funds to sustain infrastructure. This trend toward greater government involvement in functions generally allocable to the private sector flies in the face of trends almost everywhere else on earth.

Program Manager: Secretary Longuemare believes DoD will eventually gravitate toward a single procurement agency. Do you support the concept of a single procurement agency? And how would this affect your ability to respond to the different Services' unique requirements?

Mr. Augustine: In a general sense, I support greater uniformity and consistency throughout DoD procurement. I also support enhanced professionalization of the procurement workforce. And I think a single agency would make sense with regard to those commodities that are common throughout DoD and that would benefit from "bulk" purchasing. I would agree with Secretary Longuemare in this regard.

However, making peanut butter is a great deal different from making nuclear submarines or stealth aircraft. I believe we need to get closer to our



Photo courtesy of Martin Marietta Corp.

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ultimate customers and work with greater synergy with them, especially in the R&D phase of procurement. I fear a single procurement agency in those circumstances would simply add another layer of insulation to an already well-insulated process. In short, I would be opposed to centralization of this latter type.

Program Manager: How would you characterize the health of the defense industrial base?

Mr. Augustine: The industry is in a state of considerable disrepair, a fact that has not gone unnoticed on Wall Street. The major firms sell at a 30-percent discount to the S&P 500 index. The combined market value of the top four aerospace firms is less than that of McDonald's, meaning that Big Macs and Egg McMuffins are judged by the market to have greater immediate reward than stealth aircraft and "smart" weapons.

To understand the industry's current difficulties, you need to look not at the 35-percent overall drop in real defense spending, but at the nearly 70-percent decline in procurement spending since the mid-1980s. Most businesses regard a loss of 10 percent in the size of a market as a disaster; a 70-percent drop in a market is somewhat unprecedented.

Program Manager: While the picture you paint is grim, some would say that the demise of the Soviet Union means we don't need such a large defense industrial base.

Mr. Augustine: It's clear that in the changing world, America could afford to safely shrink its defense industry. And indeed we have done just that. Since the fall of the Berlin Wall, we've lost more than a million jobs, and the industry is now consolidating at a furious pace. The defense supplier base has imploded, with some numbers suggesting a shrinkage from about 120,000 firms a decade ago to 30,000 today. The question that I think is important is: "How much is enough?" My belief, based on over a third of a century serving in the Pentagon and in the defense industry, is that we are perilously close to undermining our nation's defense industrial base.

Lockheed and Martin Marietta, among other firms, have pursued what I believe to be the only rational course for dealing with such a precipitous decline: We have been consolidating — merging with strong partners now before weak companies destroy the

marketplace through desperate acts. I call the latter the Law of the Cross-Eyed Discus Thrower: "He may not win any gold medals, but he sure keeps the spectators on their toes." The bottom line is that three full factories are better — for everyone — than six half-full ones.

Program Manager: Do you see the Lockheed Martin merger as beneficial to the government?

Mr. Augustine: Yes, I do — in two ways. First, as we consolidate, we will cut overhead significantly, saving the government — and the taxpayers — large sums of money. As a result of our recent merger with GE Aerospace, we were able to close five million square feet of plant space and save the government some \$1.5 billion over the next 5 years alone — with no out-of-pocket investment by the government. I believe we'll see savings every bit as impressive after Lockheed Martin has a chance to review the ways in which we can become more efficient.

Second, and just as important, by merging now, while we're both strong, we can assure the government of a robust manufacturing and R&D resource for the future. We saw in the Gulf War the consequences of modern military technology—for example, precision guided weapons delivered within inches of their targets, stealth, the ability to see at night and to navigate within a few meters even on a desert. The result was that the war was won quickly, decisively and with relatively few American casualties. The United States needs a strong defense industrial base if it is to field such systems in the future.

Program Manager: What do you think of the talk about government downsizing?

Mr. Augustine: If I'm not mistaken, the government as a whole is talking about a 12-percent reduction in staffing by the year 2000. To an industry that has given pink slips to

more than one million dedicated workers, with another half-million likely, 12 percent doesn't sound like an overwhelming undertaking. Now, having spent 10 years in government myself, I know that such change is extraordinarily difficult. I also know that the government has large numbers of extremely able workers—but we simply must reduce costs. This is especially true of infrastructure costs. For example, the Defense procurement budget has, as I've already noted, been reduced by some 70 percent in real purchasing power—while infrastructure costs have thus far been reduced just 18 percent.

Program Manager: In light of the need to shift away from such heavy dependence on a declining Defense market, has your company been finding ways to implement dual-use and technology transfer programs?

Mr. Augustine: In previous downturns, the conventional wisdom has been to diversify as far away from defense as possible. Our industry has tried to build buses, canoes, even banjos. Our record has been unblemished by success. So I would say that to be successful, we need to go into things that are very closely related to one's core business, but outside of defense—involving large customers, high-technology and large systems. One must know one's core incompetencies.

Traditionally, dual-use refers to the transfer of technology in a direction from the defense sector to the commercial sector. However, as defense budgets continue to be reduced, exactly the opposite will become increasingly the case; that is, defense technology will in most cases no longer be at the leading edge of innovation, and the tide will turn, with state-of-the-art technologies more likely to move in the opposite direction. Having said that, I believe that it is important for companies to remain steadfast with regard to their commitment to national

NORMAN R. AUGUSTINE

Mr. Norman R. Augustine's biography is extensive enough to fill at least four pages of this magazine. Rather than highlighting his education, numerous awards, and extensive service in government and private industry, *Program Manager* reveals a little-known side of the man behind the public and corporate persona.

He has dog-sledded in the Arctic and explored volcanos in the Antarctic; backpacked in the Canadian and U.S. Rockies; horsebacked in the U.S. Rockies; sailed a tall ship in the West Indies and a stern wheeler up the Mississippi; traveled the Oregon Trail in a covered wagon; snorkeled on the Great Barrier Reef; boated the Amazon; hot-air ballooned in Africa; rafted the Grand Canyon; toured the Out-Back of Australia and the desert of Saudi Arabia; been on camera safari in Tanzania and Kenya; and photographed polar bears in the Northwest Territory.

Mr. Augustine is co-author of *The Defense Revolution* and author of *Augustine's Laws*, printed in four languages; holds copyrights on a book of his photography and on a calculator for baseball managers; and is listed in *Who's Who in America* and *Who's Who in the World*.

security. We at Lockheed Martin intend to do so.

Program Manager: Can you give us an idea of the tech transfer projects you've been involved in?

Mr. Augustine: These are, of course, the traditional commercial ventures that have benefitted American society, including: commercial communications, imaging navigation and weather satellites; medical technologies and materials; supercomputers; radar, sonar, and robotics technologies that help to clean up the environment; and defense electronics

expertise that can contribute to “intelligent” highway and rapid rail systems — to name but a few examples.

Some other areas that look particularly promising and in which we are involved include electronic simulation technology, which uses “video game” graphics simulations in a wide variety of applications (including education, medicine, advanced operator training, as well as military training), automated fingerprint recognition, and advanced diagnostic techniques for reading mammograms — to name a few.

Program Manager: What will be the role of the Armed Forces in the 21st Century?

Mr. Augustine: In the middle of this century, our Armed Forces were called upon to perform a clear mission — to fight and win a global war. For most of the latter half of this century, the American public looked to our forces to successfully prepare for war — and by so doing to deter World War III.

Today, and for the foreseeable future, the public is looking to our military to “wage peace” — that is, to deter small wars as well as big ones — a challenge that is turning out to be daunting. This is the challenge the American people have given the defense establishment as we approach the 21st Century.

Let me draw a parallel: Just as America’s commercial industry has been undergoing a wrenching realignment and downsizing over the past decade, prompted by the presence of Japan on the world scene, I believe America’s defense industry is experiencing a similar process of realignment and downsizing, prompted by the absence of the Soviet Union on the world scene.

All of this said, America is the only surviving “full-service” superpower — a fact that carries with it extraordinary



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responsibilities — and the future remains very difficult to predict. General Schwarzkopf, toward the end of his autobiography, included the following passage: “If someone had asked me on the day I graduated from West Point where I would fight for my country during my years of service, I’m not sure what I would have said. But I’m damn sure I would not have said Vietnam, Grenada and Iraq.”

And that’s the problem in trying to forecast a precise mission need for national defense and the industrial base that underpins it, a problem which is exacerbated by the 10- to 20-

year lead time for most products of the defense industrial base. For in this age of “come-as-you-are” wars, the casualties we suffer in combat may depend more on our preparedness prior to the initiation of combat than on anything we do during combat — a point writ bold in contrasting the initial battles in, say, Korea and in the Persian Gulf.

Our opportunity as a nation is to build upon the advantage of being the only remaining “full-service” superpower, and to underpin it with a right-sized, high-quality defense industrial base. This will require considerable effort on the part of those of us who bear a fiduciary responsibility for America’s military capability; because as marvelous as is the free enterprise system, there are no forces in that system to assure the preservation of an adequate defense industrial capability. This is the underlying dilemma of the defense industry.

Program Manager: One last question: We understand you’ve recently published a new book. Can you tell us about it?

Mr. Augustine: Perhaps you’ve heard that I’m working on a new set of “laws” which take up where my book, *Augustine’s Laws*, stopped. The first in this series is that, “Tornadoes are caused by trailer parks.” Actually, I have collected a good deal of empirical evidence verifying the correctness of this law. With reference to my previous books, I might advise you that I have been told by rare book dealers that unsigned copies of my books have become highly sought-after collector’s items.

Ed. Note: When *Program Manager* initially contacted Mr. Augustine for an interview, we were surprised to learn that Mr. Augustine had appeared in the original issue of the predecessor publication to *Program Manager*. In granting us this interview, he remarked that “this will make it kind of a reunion.” From the staff and faculty of DSMC, “welcome back.”